

SOUTH COAST AIR QUALITY MANAGEMENT DISTRICT ENGINEERING AND COMPLIANCE DIVISION PERMIT APPLICATION EVALUATION AND CALCULATIONS	PAGES 4	PAGE 1
	APPL NO 479451	DATE 2/18/2011
	PROCESSED BY AS08	CHECKED BY

Permit to Construct (Administrative Change)

Applicant Eastern Municipal Water District (EMWD) –Moreno Valley
Regional Water Reclamation Facility (MVRWRF)

Mailing Address 2270 Trumble Road,
P.O. Box 8300
Perris, CA 92572

Equipment Location 17140 Kitching Street
Moreno Valley, CA 92582

APPLICATION 479451, FACILITY ID 013088

Equipment Description

ALTERATION OF PERMIT TO OPERATE G1450 (APPL.NO. 455648):

SEWAGE TREATMENT FACILITY, 17.1 MGD CAPACITY, CONSISTING OF:

I. PRELIMINARY TREATMENT PROCESS COMPRISED OF:

1. ONE 22-MGD INFLUENT PUMP STATION VENTED TO ODOR CONTROL EQUIPMENT
CONSISTING OF:
 - A. FOUR BAR SCREENS
 - B. ONE GRIT CHAMBER, 18' DIA. X 18' H.

II. CONVENTIONAL ACTIVATED SLUDGE (ANAEROBIC) PLANT NO. 1, 10 MGD CAPACITY
CONSISTING OF:

1. SIX GRIT CHAMBERS, EACH 12' L. X 9' W. X 10' D.
2. EIGHT PRIMARY CLARIFIERS, EACH 65' L. X 15' W. X 10' D.
3. SIX AERATION BASINS, EACH 150' L. X 30' W. X 15' D.
4. SIX SECONDARY CLARIFIERS, EACH 88' L. X 16' W. X 10' D.
5. EIGHT SECONDARY CLARIFIERS, EACH 84' L. X 12' W. X 10' D.
6. TWO DISSOLVED AIR FLOATATION TANKS, EACH 30' DIA. X 6' D.
7. ONE INFLUENT EQUALIZATION BASIN, 150' L. X 150' W. X 15' D.

III. AEROBIC SEWAGE TREATMENT PLANT NO. 2 CONSISTING OF:

1. ANOXIC ZONE 1, 0.3 MG CAPACITY.
2. AEROBIC ZONE 1, 0.49 MG CAPACITY.
3. ANOXIC ZONE 2, 0.22 MG CAPACITY.
4. AEROBIC ZONE 2, 0.77 MG CAPACITY.
5. ANOXIC ZONE 3, 0.4 MG CAPACITY.
6. AEROBIC ZONE 3.1, 0.54 MG CAPACITY.
8. TWO SECONDARY CLARIFIERS, 125'-0" DIA. X 14'-0" H.

IV. TERTIARY SEWAGE TREATMENT PLANT CONSISTING OF:

1. TWO FLOW EQUALIZATION BASINS, 2.4 MILLION GALLON TOTAL CAPACITY.

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2. ONE FLOCCULATION BASIN, 43,758 GALLONS CAPACITY.
3. TWELVE TERTIARY FILTERS, SAND BED TYPE, EACH WITH 200 SQ. FT. FILTER AREA.
4. ONE CHLORINE INJECTION/SPLITTER BOX.
5. TWO CHLORINE CONTACT BASINS, FIVE PASS, EACH 110'-0" L. X 64'-0" W. X 11'-0" D. WITH TOTAL OF 16 MILLION GALLONS CAPACITY.
6. ONE TERTIARY EFFLUENT PUMP STATION.
7. TWO 30-TON CHLORINE COMPRESSED LIQUID/GAS STORAGE VESSELS VENTED TO AN EMERGENCY VENTILATION AND CONTROL SYSTEM (RULE 219 (d)(9) EXEMPT).

V. SEWAGE SLUDGE HANDLING AND STORAGE FACILITY CONSISTING OF:

1. FOUR FIXED ROOF ANAEROBIC DIGESTERS, 48'-0" DIA. X 22'-0" D.
2. ONE FIXED ROOF ANAEROBIC DIGESTER, 75'-0" X 29'-0" H.
3. ONE ENCLOSED, BELOW GRADE, SLUDGE HOLDING TANK, 35'-0" DIA. X 15'-0" D., VENTED TO DIGESTER GAS COLLECTION SYSTEM.
4. ONE DIGESTER GAS STORAGE SPHERE, 35'-0" DIA. OR 22,449 CUBIC FEET CAPACITY.
5. TWO FILTER BELT PRESSES, ENCLOSED AND ASSOCIATED POLYMER SYSTEM, VENTED TO ODOR CONTROL EQUIPMENT.
6. ONE SLUDGE OFFLOADING STATION WITH ASSOCIATED CONVEYOR SYSTEM.
7. EIGHTEEN SEWAGE SLUDGE DRYING BEDS, EACH 100' L. X 40' W. X 1' D.
8. BOILER, NATURAL GAS-FIRED, RALPH B. CARTER CO., MODEL H1500C41-GX, 1.5 MMBTU/HR (RULE 219 EXEMPT).
9. THREE ROTARY DRUM THICKENERS, 240 GALLON PER MINUTE CAPACITY.
10. ONE CENTRIFUGE.

VI. TREATED SEWAGE EFFLUENT EVAPORATION/PERCOLATION STORAGE PONDS CONSISTING OF:

1. TWO EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 31.0 MG CAPACITY, 670'-0" L. X 326' W. X 375'-0" W. X 21'-0" D.
2. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 30 MG CAPACITY, 662'-0" L. X 353'-0" W. X 22'-0" D.
3. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 31 MG CAPACITY, 662'-0" L. X 353'-0" W. X 22'-0" D.
4. TWO EVAPORATION/PERCOLATION EFFLUENT STORAGE PONDS, EACH 12.65 MG CAPACITY, 370'-0" L. X 331'-0" W. X 22'-0" D. (EXISTING- NO CHANGE).
5. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.23 MG CAPACITY, 362'-0" L. X 329'-0" W. X 22'-0" D.
6. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.01 MG CAPACITY, 359'-0" L. X 327'-0" W. X 22'-0" D.
7. ONE L-SHAPED EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 44.20 MG CAPACITY, 1,080'-0" L. X 250'-0" W. X 745'-0" L. X 413'-0" W. X 335'-0" L. X 663'-0" W. X 22'-0" D.
8. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 12.30 MG CAPACITY, 357'-0" L. X 335'-0" W. X 22'-0" D.
9. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 11.99 MG CAPACITY, 363'-0" L. X 323'-0" W. X 22'-0" D.
10. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 11.62 MG CAPACITY, 356'-0" L. X 321'-0" W. X 22'-0" D.

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11. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 15.16 MG CAPACITY, 391'-0" L. X 363'-0" W. X 22'-0" D.
12. ONE EVAPORATION/PERCOLATION EFFLUENT STORAGE POND, 15.00 MG CAPACITY, 393'-0" L. X 358'-0" W. X 22'-0" D.

VII. STORM WATER POND:

1. ONE STORM WATER COLLECTION POND, 358'-0" X 344'-0" L. X 20'-0" D.

BY THE ADDITION OF:

1. ONE GRIT CHAMBER, VORTEX, 18'-0" DIA. (Preliminary Treatment)
2. TWO SECONDARY CLARIFIERS, EACH 125'-0" DIA. X 14'-0" D. (Plant 2)
3. ONE DIGESTER, ACID PHASE, 4 CHAMBERS, EACH 20'-0" W. X 20'-0" L. X 21'-0" H. (Sludge Handling and Storage)
4. ONE DIGESTER, METHANE-PHASE, 70'-0" DIA. X 29'-0" H. (Sludge Handling and Storage)
5. TWO DIGESTED SLUDGE STORAGE TANKS, 48'-0" DIA. X 18'-0" H. (Sludge Handling and Storage)
6. ONE LOW PRESSURE DIGESTER GAS STORAGE TANK, 7,500 CUBIC FEET CAPACITY. (Sludge Handling and Storage)
7. ONE FERRIC ACID STORAGE TANK, 2,600 GALLON CAPACITY.
8. FOUR TERTIARY FILTERS, ROTARY DISC CLOTH, EACH 636 SQ. FT. (Tertiary Sewage Treatment)
9. SLUDGE OVERFLOW STORAGE TANK (CONVERTED FROM SLUDGE HOLDING TANKS (VI)(3)).
10. ONE CHLORINE CONTACT BASIN, FIVE PASS, EACH 110'-0" L. X 64'-0" W. X 11'-0" D. WITH TOTAL CAPACITY OF 8 MG.

BY THE REMOVAL OF:

1. TWO DIGESTERS, METHANE-PHASE, 48'-0" DIA. X 21'-0" H.
2. ONE DIGESTED SLUDGE STORAGE TANKS, 30'-0" DIA. X 14'-6" H.
3. BOILER, NATURAL GAS-FIRED, RALPH B. CARTER CO., MODEL H1500C41-GX, 1.5 MMBTU/HR (RULE 219 EXEMPT).

AND BY THE INCREASE OF INFLUENT FLOW CAPACITY TO 17.4 MGD (EXCEPT DURING WET WEATHER CONDITIONS)

Background/Process Description

The above application was submitted on March 19, 2008 as an administrative change application type to update the equipment description for a Rule 219 exempt boiler which is part of the Sewage Sludge Handling and Storage Facility of an anaerobic sewage treatment plant (>5 MGD). The facility is a municipal water district which accepts and treats municipal sewage and produces recycled water at Eastern Municipal Water District-Moreno Valley Regional Water Reclamation Facility (EMWD-MVRWRF). The current sewage treatment plant equipment description indicates a boiler, natural gas-fired, Ralph B. Carter Bol, Model No. H1500C41-GX, 1.5 mmBtu/hr (Rule 219 exempt). The applicant requested to update the equipment description for a boiler, natural gas-fired, Hurst, Low NOx, Model 4vt-47.5-W125, 1.95 mmBtu/hr (Rule 219 exempt) or to remove it from the sewage treatment plant permit,

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since it is already listed in the Rule 219 exempt equipment portion of Section D. The sewage treatment plant operates under A/N 474814 Permit to Construct and is permitted to accept 17.4 MGD of raw sewage. A/N 479451 will supersede and include the modifications from A/N 474814. Subsequently A/N 474814 will be cancelled and removed from the Title V Facility Permit. Please see the engineering evaluation under A/N 474814 for emission calculations and rule evaluation.

There is a school within 1000 feet of the emission sources. Although pursuant to Rule 212(c)(1) this modification shall not have an affect to emissions, therefore a public notice is not required. In the last three years a Notice to Comply was issued to the above facility. Notice to Comply D14829 was issued on April 8, 2008 to provide the following: 1) copies of source test (cover page & results page only) for ICE permits F68934, F63608, and F68132, 2) Ignition timing inspection report for ICE permits F36089, F36095, F66584, and F68933, 3) oxygen concentration at the outlet for ICE permits F63608 and F68933. The above facility has received one complaint for odors in the last three years.

Emissions

There is no change in emissions. Emissions are replicated from Permit to Construct, A/N 474814.
VOC: R1 = R2 = 1.28 lbs/hr = 31 lbs/day (NSR)

Conclusions and Recommendations

A Permit to Construct is recommended for application 479451. For Permit Conditions please see Sample Permit. A revised Title V permit is recommended after EPA review.